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NAS WHITING FIELD
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FINAL RECORD OF DECISION FOR SITE 9 NAS WHITING FIELD FL
9/16/2005
TETRA TECH NUS

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888



Rev. 1
09/16/05

Record of Decision for Surface and Subsurface Soils at Site 9, Waste Fuel Disposal Pit

**Naval Air Station Whiting Field
Milton, Florida
USEPA ID No. FL2170023244**

Contract Task Order 0369

September 2005



Southern Division

Naval Facilities Engineering Command

2155 Eagle Drive

North Charleston, South Carolina 29406

**RECORD OF DECISION
FOR
SURFACE AND SUBSURFACE SOILS AT
SITE 9, WASTE FUEL DISPOSAL PIT**

**NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA
USEPA ID No. FL2170023244**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

**Submitted by:
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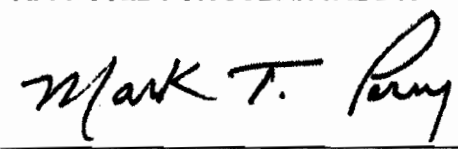
**CONTRACT NO. N62467-94-D-0888
CONTRACT TASK ORDER 0369**

September 2005

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CERTIFICATION OF TECHNICAL DATA CONFORMITY

The Contractor, Tetra Tech NUS, Inc., hereby certifies, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-94-D-0888 are complete, accurate, and comply with all requirements of this contract. The work and professional opinions rendered in this report were conducted or developed in accordance with commonly accepted procedures consistent with applicable standards of practice.

DATE: 30 September 2005

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ACRONYMS

ABB-ES	ABB Environmental Services, Inc.
BEI	Bechtel Environmental, Inc.
bls	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Constituent of Concern
COPC	Constituent of Potential Concern
ERA	Ecological Risk Assessment
EE	Envirodyne Engineers, Inc.
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDER	Florida Department of Environmental Regulation
FS	Feasibility Study
FSA	Feasibility Study Addendum
HHRA	Human Health Risk Assessment
HLA	Harding Lawson and Associates
IAS	Initial Assessment Study
IR	Installation Restoration
mg/kg	milligrams per kilograms
NACIP	Navy Assessment and Control of Installation Pollutants
NAS	Naval Air Station
Navy	United States Navy
NFA	No Further Action
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OVA	Organic Vapor Analyzer
PRG	Preliminary Remediation Goal
RA	Remedial Action
RfDs	Reference Doses
RI	Remedial Investigation
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SCTL	Soil Cleanup Target Levels
SERA	Screening Ecological Risk Assessment
SVOCs	Semi Volatile Organic Compounds
TtNUS	Tetra Tech, NUS, Inc.
TOVCs	Total Organic Vapor Concentrations
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

1.0 DECLARATION OF THE RECORD OF DECISION

1.1 SITE NAME AND LOCATION

Naval Air Station (NAS) Whiting Field is located approximately 5.5 miles north of the town of Milton, Florida in Santa Rosa County, about 25 miles northeast of Pensacola (Figure 1-1). Site 9, Waste Fuel Disposal Pit, is located along the eastern facility boundary near the South Air Field, at NAS Whiting Field. The approximate location of Site 9 is shown on Figure 1-1.

1.2 STATEMENT OF BASIS AND PURPOSE

This decision document proposes No Further Action (NFA) for surface and subsurface soils at Site 9, NAS Whiting Field. Groundwater at NAS Whiting Field has been identified as a separate site (Site 40, Basewide Groundwater) and will be addressed in a future decision document. The selected action was chosen by the United States Navy (Navy) and the United States Environmental Protection Agency (USEPA) in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Information supporting the selection of this action is contained in the Administrative Record for this site. The NAS Whiting Field Information Repository, including the Administrative Record, is located at the West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida 32570, (850) 623-5565.

The Florida Department of Environmental Protection (FDEP) concurs with the selected remedy.

1.3 ASSESSMENT OF THE SITE

The Remedial Investigation (RI) Report for Sites 9 and 10 [Harding Lawson and Associates (HLA), 1999] identified two semi-volatile organic compounds (SVOCs) and 18 inorganic compounds in the surface soil at Site 9. One inorganic constituent, antimony, was identified as a constituent of potential concern (COPCs) in the Feasibility Study Addendum (FSA) and no human health risks were identified for exposure to surface and subsurface soils under a residential land use scenario. A summary of site risks is provided in Section 2.6 of this Record of Decision (ROD).

The results of the ecological risk assessment (ERA) presented in the RI indicate ecological risks at the site are acceptable, and further ecological study is unwarranted because the site

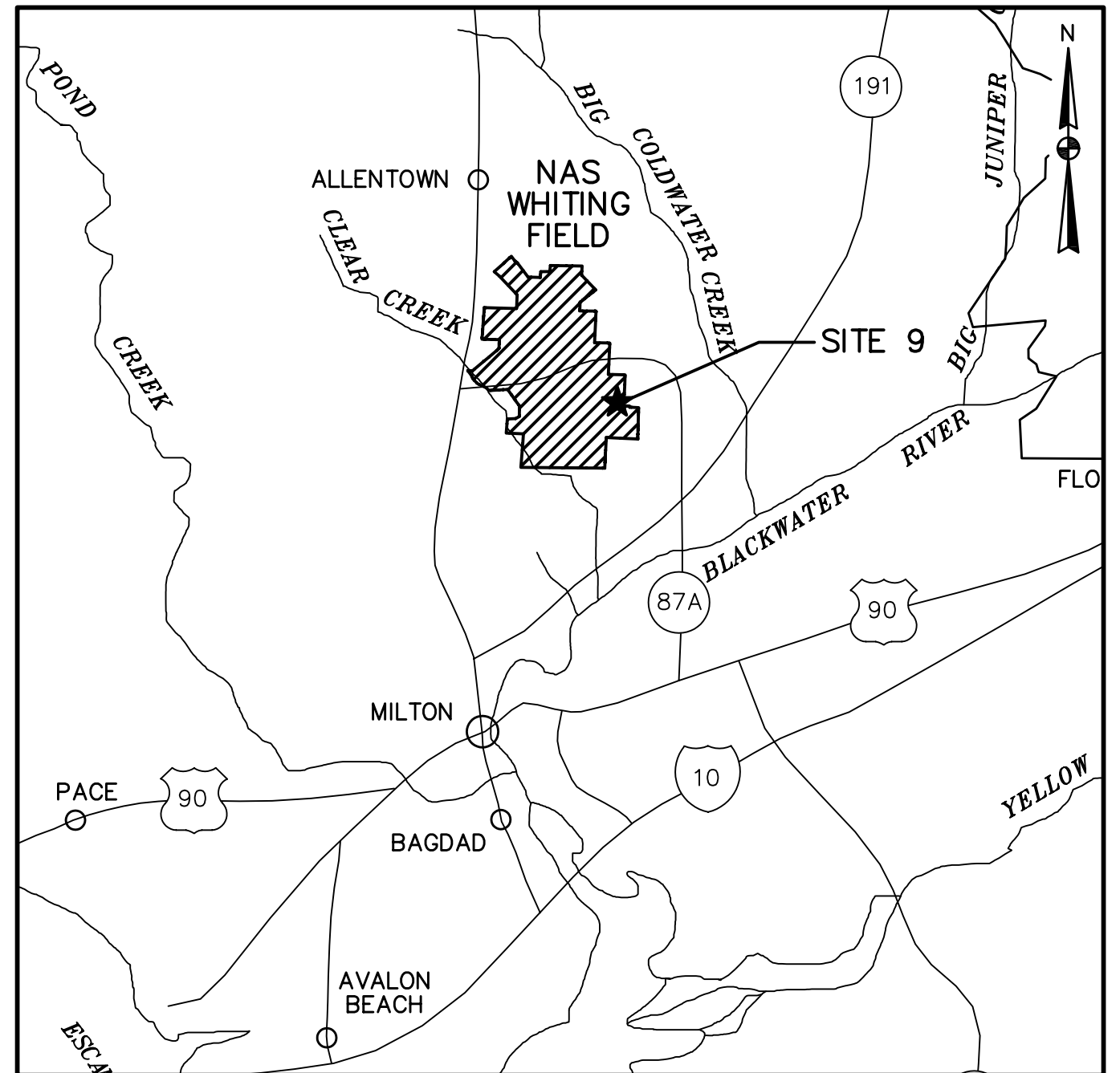
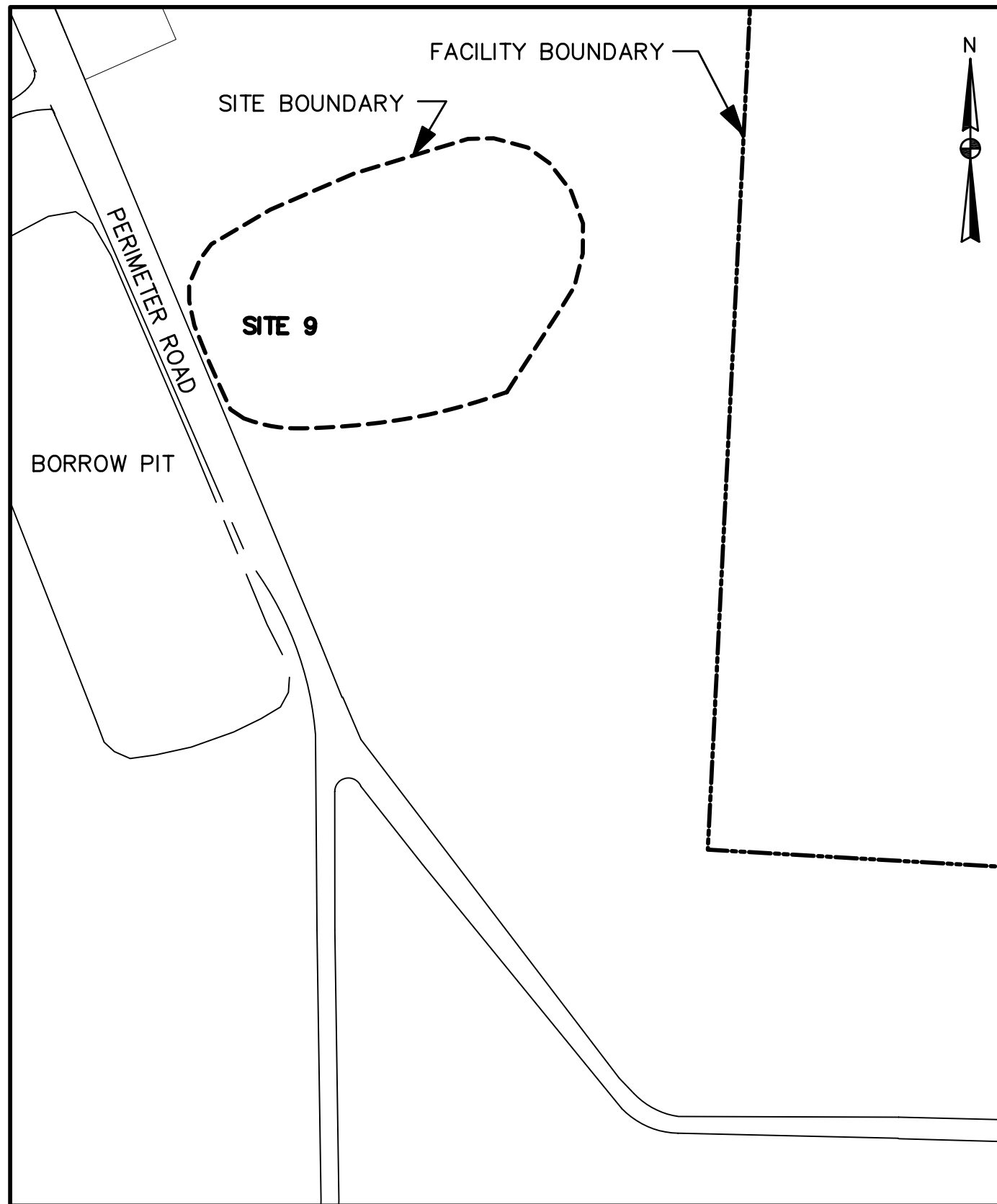


FIGURE 1-1
SITE 9 LOCATION AND AREA MAP
RECORD OF DECISION
NAS WHITING FIELD, MILTON, FLORIDA



is limited in the quantity and quality of habitat. Site 9 is currently vacant, unused land with a 24-inch permeable soil layer and native grass cover emplaced over the surface soil of the site in 1999 [Bechtel Environmental, Inc. (BEI), 2000].

Most importantly, the limited size and habitat of the site serves to restrict the amount of food available to upper trophic level organisms. A discussion of the potential ecological risk is presented in Section 2.6.2.

1.4 DESCRIPTION OF THE SELECTED REMEDY

This ROD presents the final action for surface and subsurface soils at Site 9 and is based on results of the RI (HLA, 1999), the Feasibility Study (FS) (HLA, 2001) and the FSA [Tetra Tech NUS, Inc. (TtNUS), 2005a]. The selected remedy for Site 9 is NFA for surface and subsurface soils and ensures protection of human health and the environment.

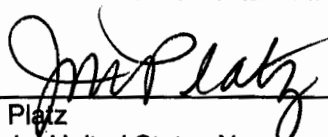
This ROD only addresses surface and subsurface soil at Site 9. Consequently, this ROD does not address actual or potential groundwater contamination at the site. Groundwater at NAS Whiting Field has been identified as a separate site (Site 40, Basewide Groundwater) and will be addressed in a future decision document. Sediment and surface water are not present at Site 9. Current soil conditions at Site 9 are protective of human health and the environment under an unlimited exposure, unrestricted use scenario. No CERCLA action for surface and subsurface soils is necessary because the contaminants found do not pose a risk to human health and the environment based on an unrestricted use scenario.

1.5 STATUTORY DETERMINATIONS

The NFA remedy selected for surface and subsurface soils at Site 9 is protective of human health and the environment, complies with federal and state requirements legally applicable or relevant and appropriate, and is cost effective. No remedial action is necessary to ensure protection of human health and the environment based on an unlimited exposure unrestricted use scenario. Consequently, no active treatment or monitoring will be conducted at Site 9.

1.6

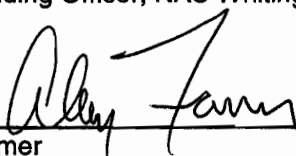
AUTHORIZING SIGNATURES



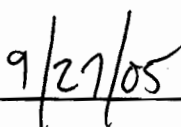
Joan Platz
Captain, United States Navy
Commanding Officer, NAS Whiting Field



Date



Alan Farmer
Acting Director, Waste Management Division
USEPA, Region IV



Date

2.0 DECISION SUMMARY

2.1 SITE NAME, LOCATION, AND DESCRIPTION

Site 9, Waste Fuel Disposal Pit, is approximately two-acres and is located along the eastern facility boundary near the South Air Field, at NAS Whiting Field, Milton, Florida.. The approximate location of the disposal pit is shown on Figure 2-1 based on a geophysical survey conducted during Phase IIA RI fieldwork [ABB Environmental Services, Inc. (ABB-ES), 1992a].

2.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.2.1 NAS Whiting Field History

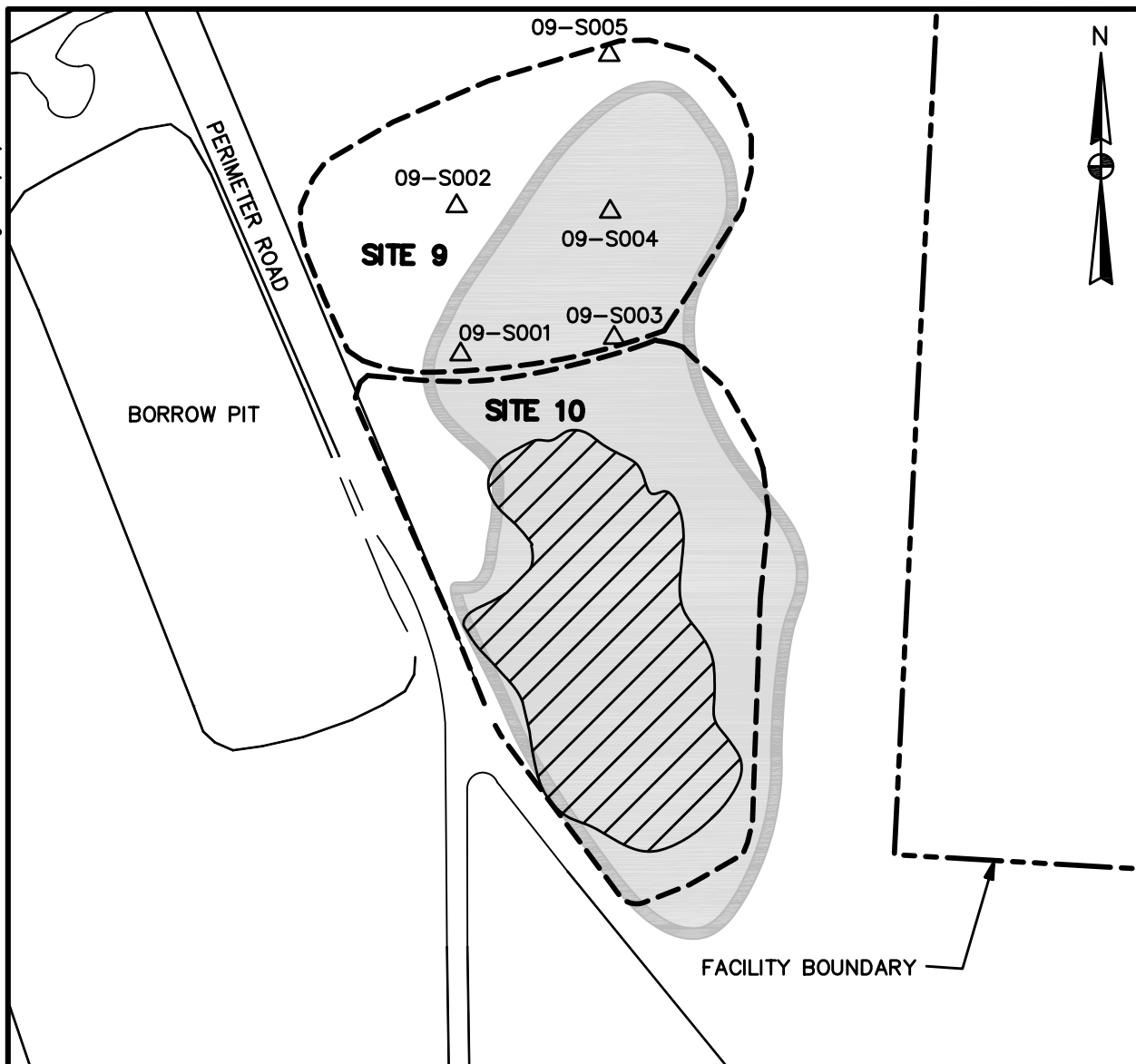
NAS Whiting Field was placed on the National Priorities List (NPL) by the USEPA in June 1994. Following the listing of NAS Whiting Field on the NPL, remedial response activities have been conducted pursuant to CERCLA authority.

The first environmental studies for the investigations of waste handling and/or disposal sites at NAS Whiting Field were conducted during the Initial Assessment Study (IAS) [Envirodyne Engineers, Inc. (EE), 1985]. The record search indicated throughout its years of operation, NAS Whiting Field generated a variety of wastes related to pilot training, operation and maintenance of aircraft and ground support equipment, and facility maintenance programs.

NAS Whiting Field presently consists of two airfields (North and South Fields) and serves as a naval aviation training facility providing support facilities for flight and academic training. The current and anticipated future land use at Site 9 is nonresidential / recreational.

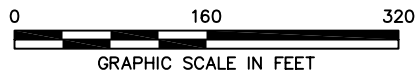
2.2.2 Site 9 History

Site 9 was used for the disposal of an undetermined amount of waste aviation fuel. During the 1950s and 1960s, waste fuel (i.e., aviation fuel) containing tetraethyl lead was reportedly disposed of in the northern part of Site 9. Reportedly, a tanker truck was used to transport waste fuel to an unlined disposal pit where it was drained. Based on anecdotal information, approximately 200 to 300 gallons of waste fuel were disposed of at the site per trip. The total quantity of fuel disposed of at the site is unknown. Furthermore, the precise location of the disposal pit is unknown; however, at the approximate location of the suspected disposal pit, an ephemeral pond occurs during heavy rain periods. There has not been any active disposal at the site since the 1960s.



LEGEND:

- △ PHASE IIB SURFACE SOIL SAMPLE LOCATION AND DESIGNATION
- APPROXIMATE SITE BOUNDARY
- NAS NAVAL AIR STATION
- ▨ APPROXIMATE FORMER LANDFILL AREA
- 2 FEET SOIL COVER
- TOE OF SOIL COVER



DRAWN BY HJB	DATE 3/15/05
CHECKED BY	DATE
REVISED BY	DATE
SCALE AS NOTED	



**LOCATION OF SOIL COVER
AND SURFACE SOIL SAMPLES
SITE 9, WASTE FUEL DISPOSAL PIT
RECORD OF DECISION
NAS WHITING FIELD
MILTON, FLORIDA**

CONTRACT NO. 0006	
OWNER NO. 0000	
APPROVED BY	DATE
DRAWING NO. FIGURE 2-1	REV. 0

Past disposal of hazardous waste (described above) at Site 9, although acceptable at the time, had the potential to cause long-term problems through the release of hazardous constituents into the soil and groundwater. As part of the Installation Restoration (IR) Program and the Navy Assessment and Control of Installation Pollutants (NACIP), Site 9 was included in the IAS (EE, 1985) for NAS Whiting Field.

Two SVOCs and 18 inorganic compounds were detected in the surface soil at Site 9 as presented in Section 2.5. The individual inorganic constituents, arsenic, aluminum, iron, and vanadium, detected at the site have no direct evidence of site-related use at Site 9 and the procedures at this site did not likely contribute to the presence of these inorganics in surface soil. Additionally, the site-specific concentrations of these inorganics are within the range of background levels found at NAS Whiting Field and of naturally occurring levels throughout the southeastern United States. Considering the information presented above, arsenic, aluminum, iron, and vanadium were dropped from consideration as COPCs for Site 9 surface soils. Table 2-1 summarizes the Site 9 investigative history.

2.3 HIGHLIGHTS OF COMMUNITY PARTICIPATION

The FSA and Proposed Plan (TtNUS 2005a and 2005b) for Site 9 were made available to the public for review in August 2005. These documents, and other IR program information, are contained within the Administrative Record in the Information Repository at the West Florida Regional Library, Milton, Florida.

The notice of availability of all site-related documents was published in the Santa Rosa Press Gazette on 30 July 2005 and the Pensacola News Journal on 31 July 2005 and targeted the communities closest to NAS Whiting Field. The availability notice presented information on the RI, FS, and FSA at Site 9 and invited community members to submit written comments on the Proposed Plan.

A public comment period was held from 01 August through 29 August 2005, to solicit comments on the Proposed Plan. The comment period included an opportunity for the public to request a public meeting; however, a public meeting was not held because one was not requested. The site-related documents were placed in the Information Repository and made available for the public to review. Comments received during the public comment period are presented in the Responsiveness Summary in Appendix A.

TABLE 2-1
INVESTIGATIVE HISTORY
RECORD OF DECISION
SITE 9, WASTE FUEL DISPOSAL PIT
NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA

Date	Investigation Title	Activities	Findings
1985	Initial Assessment Study, NAS Whiting Field, Milton, Florida (Envirodyne Engineers, Inc., 1985)	<ul style="list-style-type: none">Review of historical records and aerial photographsField inspections and personal interviews	<ul style="list-style-type: none">In the 1950s and 1960s, waste fuel was reportedly disposed at Site 9.Site 9 was recommended for additional investigation due to the presence of human and ecological receptors.
1986	Verification Study, Assessment of Potential Groundwater Pollution at NAS Whiting Field, Florida (Geraghty & Miller, Inc., 1986)	<ul style="list-style-type: none">Collection and analysis of 6 surface soil and 6 subsurface soil samplesInstallation of one monitoring well and groundwater sampling	<ul style="list-style-type: none">Total lead was detected between 9 and 14 milligrams per kilogram (mg/kg) in soil samples. EP toxicity tests indicated lead below detection limit of 0.01 mg/kg.Lead was detected below Florida's primary drinking water standards.
1990 - 1999	Remedial Investigation Report, Sites 9 and 10, NAS Whiting Field, Milton, Florida, [Harding Lawson Associates (HLA), 1999]	<ul style="list-style-type: none">Geological assessmentHydrogeological assessmentPCPT and BAT groundwater samplingCollection and analysis of surface soil samplesSoil gas surveyInstallation of groundwater monitoring wells and groundwater samplingHHRAERA	<ul style="list-style-type: none">The groundwater flow direction is to the southeast across the site.TOVCs and/or methane were not present in soil gas samples collected at Site 9.The HHRA determined the carcinogenic risk from exposure to surface soil was within USEPA's acceptable risk range for current and future receptors at Site 9.The total ELCR associated with exposure to surface soil by a hypothetical future resident (10^{-5}) exceeded FDEP's target level of concern (10^{-6}) due to the presence of arsenic.The non-cancer risk associated with ingestion and direct contact of soil under current and hypothetical future land-uses are below USEPA's and FDEP's target HI of 1.0.The ERA does not predict unacceptable risks to ecological receptors from chemicals present in surface soil at Site 9.
1999	Interim Remedial Action Completion Report, Sites 9, 10, 17, 18, 31C, Surface Soil Remediation, NAS Whiting Field, Milton, Florida (BEI, 2000)	<ul style="list-style-type: none">Collection of 42 soil samplesSite clearing and grubbingLeveling of debris pilesPlacement of 15,940 cubic yards of backfill and compaction	<ul style="list-style-type: none">Contamination delineated based on Florida industrial SCTLsCompleted placement of 15,940 cubic yard soil coverSeeded and re-graded site
2001	Feasibility Study for Sites 9 and 10, NAS Whiting Field, Milton, Florida (HLA, 2001).	<ul style="list-style-type: none">Evaluated remedial alternatives for site cleanup of COCs.	<ul style="list-style-type: none">Two COCs identified for surface soil, LUCs recommended.
2005	Feasibility Study Addendum for Site 9, Waste Fuel Disposal Pit, NAS Whiting Field, Milton, Florida (TtNUS, 2005a).	<ul style="list-style-type: none">Evaluated remedial alternatives for site cleanup of COCs.	<ul style="list-style-type: none">No surface or subsurface soil COCs identified.
2005	Proposed Plan, Site 9, Waste Fuel Disposal Pit, NAS Whiting Field, Milton, Florida, (TtNUS, 2005b)	<ul style="list-style-type: none">Established public comment period from August 01 through August 29, 2005.	<ul style="list-style-type: none">Proposed remedy: No Further Action for Site 9 surface and subsurface soils.No comments received.

Notes:
EP = extraction procedure
HLA = Harding Lawson Associates
BAT = Bengt-Arne-Torstensson
HHRA = human health risk assessment
ERA = ecological risk Assessment
HI = hazard index
COC = constituents of concern
FDEP = Florida Department of Environmental Protection
TOVCs = Total organic vapor concentrations
TtNUS = Tetra Tech, NUS, Inc.
USEPA = United States Environmental Protection Agency
SCTLs = Soil Cleanup Target Levels

2.4 SCOPE AND ROLE OF REMEDIAL ACTION SELECTED FOR SITE 9

Site 9, the subject of this ROD, addresses surface and subsurface soil contamination and presents the final response action as NFA. The groundwater at NAS Whiting Field has been designated as a separate site (Site 40, Basewide Groundwater) and is not addressed in this ROD.

2.5 SITE CHARACTERISTICS

Site 9, Waste Fuel Disposal Pit, is approximately two acres in size and is located along the eastern facility boundary near the South Air Field, at NAS Whiting Field, Milton, Florida.

2.5.1 Nature and Extent of Contamination

Historical aerial photographs and engineering drawings, provided by the Navy, were evaluated during the planning phases of the RI. The objective of the evaluation was to determine the history of Site 09 and to verify earlier historical accounts.

As part of the RI conducted for Site 9, data were collected to determine the nature and extent of releases of site-derived contaminants in surface and subsurface soil, to identify potential pathways of migration in surface and subsurface soil, and to evaluate risks to human and ecological receptors.

The Proposed Plan recommended NFA for surface and subsurface soils at Site 9. This ROD documents the selected remedial action (RA) for Site 9 as a NFA for surface and subsurface soils. The groundwater at NAS Whiting Field has been designated as a separate site (Site 40, Basewide Groundwater) and is not addressed in this ROD.

2.5.1.1 Surface Soil

Surface soil sampling was conducted at Site 9 to determine the nature and extent of contamination at the site and to assess whether or not surface soil could potentially serve as an exposure pathway to human or ecological receptors. Constituents detected in surface soil at Site 9 included two SVOCs and 18 inorganic analytes. One COPC, antimony, was identified, however, it was not retained as a constituent of concern (COC) following the human health risk assessment (HHRA) and the ERA. Therefore, no human health risks were identified for exposure to surface and subsurface soils at Site 9.

A complete list of all constituents sampled and their detected concentrations in surface soil is available in the RI report (HLA, 1999).

2.5.1.2 Subsurface Soil

The subsurface soil below the 0 to 1 ft below land surface (bls) interval was not sampled at Site 9 based on results of a soil gas survey conducted at the site.

A soil gas survey was conducted in June 1995 at Site 9 to assess the presence of methane gas and other volatile organic compounds (VOCs) potentially in subsurface soils at the site. Soil gas samples were collected across the site. At each location, an open-ended stainless-steel tube was pushed or driven to sampling depths of 1.5 feet and 3.0 feet bls and organic vapor measurements were recorded. Total organic vapor concentrations (TOVCs) were measured using a PortaFid or Foxboro organic vapor analyzer (OVA). Soil gas samples were not submitted for laboratory analysis.

Measurable concentrations of TOVCs and/or methane were not present in the soil gas samples collected at Site 9. This indicates that disposal materials, if present, were not generating measurable concentrations of organic vapors and therefore, no subsurface soil samples were collected at the site.

2.5.2 Ecological Habitat

Site 9 is limited in the quantity and quality of habitat for ecological receptors. Most importantly, the limited size and habitat of the site serves to restrict the amount of food available to upper trophic level organisms.

2.5.3 Migration Pathways

No COCs were identified for exposure to surface and subsurface soils at Site 9; therefore, the leaching of constituents from the soil to groundwater, is not a concern.

2.5.4 Current and Potential Future Land Use

The current and anticipated future land use at Site 9 is nonresidential / recreational.

2.6 SUMMARY OF SITE RISKS

A baseline risk assessment was completed for Site 9 to predict whether the site would pose current or future threats to human health or the environment. Both a HHRA and an ERA were performed for Site 9. These risk assessments evaluated the constituents detected in site soil during the RI and evaluated the COPCs.

The HHRA and the ERA provides the basis for selecting the remedial alternative for Site 9. This section of the ROD summarizes the results of the HHRA and the ERA for Site 9.

2.6.1 HHRA

A revised HHRA was conducted at Site 9 to characterize the risks associated with potential exposures to site-related contaminants for human receptors. The revised HHRA is provided in Chapter 3.0 of the *Risk Assessment Re-evaluation of Soils at Sites 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18* report (TtNUS, 2004).

One COPC, antimony, was evaluated and no human health risks were identified for surface or subsurface soils at Site 9.

2.6.1.1 Risk Characterization

For the risk characterization at Site 9 potential risks were estimated for five receptors (the hypothetical future resident, the typical industrial worker, the construction worker, the maintenance worker, and the recreational user/trespasser). Potential risks were calculated for antimony using the methodology presented in Section 2.0 of the *Risk Assessment Re-evaluation of Soils at Sites 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18* report (TtNUS, 2004). Antimony was the only chemical detected at concentrations in excess of the direct contact, risk based COPC screening levels and background concentrations and consequently was retained as a COPC. The detected concentration exceeded the simple apportioned Preliminary Remediation Goal (PRG) but was less than the non-apportioned PRG and simple apportioned and non-apportioned soil cleanup target levels (SCTLs).

COPCs for Site 9 were selected, in part, using available background concentrations for soil. Aluminum, arsenic, iron, and vanadium were eliminated as COPCs, in part, on the basis of background concentrations. Table 2-2 provides a qualitative risk evaluation of these metals by comparing the maximum detected concentrations to their respective FDEP residential SCTLs.

The SCTLs presented for aluminum, iron, and vanadium are based on the potential for non-cancer health effects. The maximum detected concentration of iron is 1.3 times greater than the SCTL. The reference doses (RfDs) for aluminum and iron are based on allowable intakes rather than on adverse effect levels; consequently, an exceedance of the SCTLs is not a definitive indication of the potential for adverse non-cancer health effects. The maximum detected concentration of vanadium is approximately 5 times greater than its SCTL. The residential SCTL for vanadium is based on acute exposures to soil by a child; as a point of comparison, a residential SCTL based on chronic exposures is 510 milligrams per kilograms (mg/kg). The SCTL presented for arsenic is based on the potential for cancer effects and represents the 1×10^{-6} (one-in-one million) cancer risk level (the value is the COPC screening levels used in this HHRA).

TABLE 2-2

Rev. 1
09/16/05

**OCCURRENCE, DISTRIBUTION, AND COC SELECTION - SURFACE SOIL
RECORD OF DECISION
SITE 9, WASTE FUEL DISPOSAL PIT
NAVAL AIR STATION, WHITING FIELD
MILTON FLORIDA**

CAS No.	Constituent of Potential Concern	Maximum Concentration (1)	Exposure Point Concentration (2)	Non-Appportioned FDEP Residential SCTL- Direct Contact (3)	Ratio (Maximum/Non-Appportioned SCTL) Is Ratio > 1?	Site above Background? (4)	Is Chemical a Potential Level 1 COC? (5)	Rationale/Comments
Inorganics (mg/kg)								
7429-90-5	ALUMINUM	33100	33100	72000 N	4.6E-01	no	No	maximum < SCTL
7440-36-0	ANTIMONY	8.3 J	8.3	26 N	3.2E-01	NE(6)	No	maximum < SCTL
7440-38-2	ARSENIC	10.1	10.1	0.8 C	1.30E+01	no	No	(7)
7439-89-6	IRON	29800	29800	23000 N	1.30E+00	no	No	(7)
7440-62-2	VANADIUM	76.7	76.7	15 N	5.10E+00	no	No	(7)

Footnotes:

- 1 Sample and duplicate are counted as two separate samples when determining the maximum detected concentration.
- 2 Exposure point concentrations (EPCs) are maximum concentrations or 95 % upper confidence limits (UCLs) on the arithmetic mean as determined by statistical tests and calculations performed by the USEPA's ProUCL software.
- 3 Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Florida Department of Environmental Protection (FDEP), April 2005.
- 4 If the site data to background data comparisons determine that the site concentrations of a constituent were not significantly different from background, that chemical was not selected as a potential COC.
- 5 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed background levels.
- 6 NE - Not Evaluated. Site data to background data comparisons were not performed for the purpose of identifying metals exceeding background concentrations if the maximum concentration did not exceed the applicable SCTL.
- 7 These metals are not known to be associated with past practices or processes at Site 9 and the concentrations in soil at the site are considered to be naturally occurring or representative of anthropogenic background levels. Therefore, these constituents are not selected as potential COCs for the site.

Definitions:

C = Carcinogen.
 COC = Constituent of concern.
 J = Estimated value.
 N = Noncarcinogen.
 mg/kg = milligrams per kilogram

Also (as discussed above in Section 2.2.2), although concentrations of aluminum, arsenic, iron, and vanadium in surface soil exceed respective screening criteria, these inorganics are not known to be associated with past practices or processes at any NAS Whiting Field sites. Surface soils associated with NAS Whiting Field landfills are composed of natural soil covers and do not reflect subsurface landfill contents. Therefore, these inorganics were not retained as COPCs for direct contact exposures to surface soil at the Site 9.

No subsurface soil samples were collected at Site 9; therefore, risk estimates were only calculated for exposures to surface soil. Subsurface soil samples were not collected based on results of the soil gas survey conducted at the site (see Section 2.5.1.2).

2.6.1.2 Uncertainty Analysis

General uncertainties associated with the risk estimation process and site-specific uncertainties are discussed or referenced in the RI.

2.6.2 ERA

A screening ecological risk assessment (SERA) was performed for Site 9. Several organic and inorganic compounds were detected in surface soil at concentrations exceeding conservative screening levels and, therefore, were selected as COPCs. These COPCs were assessed in a less conservative Step 3A evaluation.

The results of the Step 3A analysis indicate the constituents detected in the surface soil at Site 9 do not pose unacceptable risks to ecological receptors and will not be evaluated further.

2.6.3 Site Risk Summary

No unacceptable human health risks have been identified for Site 9 surface and subsurface soils under a residential land use scenario and risks to ecological receptors are acceptable. Therefore; the selected remedy is NFA for Site 9.

2.7 DOCUMENTATION OF SIGNIFICANT CHANGES

No significant changes have occurred at Site 9 since the public comment period for the Proposed Plan.

REFERENCES

Bechtel Environmental, Inc. (BEI), 2000. *Interim Remedial Action Completion Report, Sites 9, 10, 17, 18, 31C, Surface Soil Remediation, NAS Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina.

Envirodyne Engineers, Inc. (EE), 1985. *Initial Assessment Study, NAS Whiting Field, Milton, Florida.* Final Report. Prepared for Naval Energy and Environmental Support Activity, Port Hueneme, California.

Harding Lawson Associates (HLA), 1999. *Remedial Investigation Report for Sites 9 and 10, Surface and Subsurface Soil, Naval Air Station Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. March.

HLA, 2001. *Feasibility Study for Sites 9 and 10, Surface and Subsurface Soil, Naval Air Station Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. March.

Tetra Tech NUS, Inc. (TtNUS), 2004. *Risk Assessment Re-evaluation for Soils at Sites 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18, Naval Air Station Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. October.

TtNUS, 2005a. *Feasibility Study Addendum for Site 9, Waste Fuel Disposal Pit, Surface and Subsurface Soil, Naval Air Station Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. September.

TtNUS, 2005b. *Proposed Plan for Site 9, Waste Fuel Disposal Pit, Naval Air Station Whiting Field, Milton, Florida.* Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. July.

APPENDIX A

COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

**Responsiveness Summary
Site 9, Waste Fuel Disposal Pit
Naval Air Station Whiting Field
Milton, Florida**

A public comment period on the Site 9 Proposed Plan was held from 01 August through 29 August, 2005.
No public comments were received, and because a public meeting was not requested one was not held.